Part IX
Just the Facts

Centennial Handbook

Need the facts fast, but running a little short on time? We put them right here at your fingertips.

How Did the National Wildlife Refuge System Begin?

The National Wildlife Refuge System—Celebrating a Century of Conservation

In 1903, President Theodore Roosevelt ordered that a small shell- and mangrove-covered island in Florida's Indian River be forever protected as a "preserve and breeding ground for native birds." Paul Kroegel, a local man, was hired to watch over the 5-acre sanctuary named Pelican Island Bird Reservation. His mission was clear: protect the island's pelicans from poachers and plume hunters.

With this simple promise of wildlife protection, the National Wildlife Refuge System was born. Nearly a century later, the Refuge System has grown to more than 93 million acres and includes more than 530 refuges–at least one in every state–and more than 3,000 waterfowl production areas.

Here's a look at some of the defining moments in the history of the National Wildlife Refuge System and the U.S. Fish and Wildlife Service, which administers the system.

1903
On March 14, President Theodore Roosevelt establishes Pelican Island Bird Reservation in Florida as the nation's first bird sanctuary. During his term, Roosevelt created 51 bird reservations and 4 big game preserves in 17 states and three U.S. territories.

1905-1912
The first refuges established for big game animals are Wichita Mountains Wildlife Refuge (OK) in 1905; the National Bison Range (MT) in 1908; and the National Elk Refuge (WY) in 1912.

1918
The Migratory Bird Treaty Act between the United States and Great Britain (for Canada) becomes the foundation for future legislation that will greatly expand the refuge system.

1924
Upper Mississippi Wildlife and Fish Refuge (IA, IL, MN and WI), the first refuge designated for waterfowl management, is established.

1934
With Midwestern prairie potholes drying up and waterfowl populations at an all-time low, President Franklin D. Roosevelt convenes a committee to determine how to save waterfowl. Conservationist Aldo Leopold, cartoonist J.N. "Ding" Darling and publisher Thomas Beck suggest a migratory bird stamp to raise funds for acquiring wetlands habitat. Congress soon passes the Migratory Bird Hunting and Conservation Act (the "Duck Stamp Act").

1935-1936
Biologist J. Clark Salyer travels the country buying prime wetlands for the refuge system. The 600,000 acres Salyer purchased became more than 50 national wildlife refuges, including Red Rock Lakes (MT) for trumpeter swans and Agassiz (MN) for waterfowl.

1940
Rachel Carson, an editor with the Fish and Wildlife Service, writes a series of "Conservation in Action" booklets examining wildlife and habitats on national wildlife refuges.

1949
Aldo Leopold's A Sand County Almanac is published the year after his death. This seminal work has been called the "closest text to a bible the conservation movement has ever produced." The book introduced the concept of managing natural resources in ecosystems.

1956
The Fish and Wildlife Act establishes a comprehensive national fish and wildlife policy and broadens the Service's authority to acquire and develop national wildlife refuges.

1958
To support the Fish and Wildlife Act, Congress passes the Duck Stamp Act to authorize acquisition of small wetland potholes as waterfowl production areas. The Service has acquired more than 2 million acres of wetland and grassland habitat from 28,000 landowners in 8 north-central states. The resulting waterfowl production areas vary in size from one acre in Lake County, Montana, to 20,840 acres in Edmunds County, South Dakota.

1962
The Refuge Recreation Act permits recreational activities on refuges where they do not conflict with refuges' primary wildlife purpose, and when there is funding to manage recreational activities.

This same year sees the publication of Rachel Carson's Silent Spring, which awakened the world to the dangers of the pesticide DDT on migratory birds and created a new awareness of human impacts on nature and wild places.

1964
Several legislative actions benefit the National Wildlife Refuge System:

The Land and Water Conservation Act
Authorizes appropriations of Land and Water Conservation Funds derived from offshore oil leases to acquire wildlife habitat.

The Wilderness Act
Establishes guidelines for designating wilderness areas to protect unspoiled habitat within national parks, wildlife refuges and other public lands. Some 20 million refuge acres are designated wilderness areas.

The National Wildlife Refuge System Administration Act
Creates the standard that secondary uses must be consistent with the major purposes for which refuges are established.

1966
The National Wildlife Refuge System Act includes measures to preserve ecosystems for endangered species, perpetuate migratory bird species, preserve natural diversity and create public appreciation for wildlife protection.

1967
The Endangered Species Preservation Act is passed, allowing listing of native animal species as endangered and providing means—though limited—to protect listed species. Land acquisition for protection of endangered species was also authorized.

1970
The nation celebrates the first Earth Day, marking the unofficial beginning of the rise of the American environmental movement and a renewed interest in conserving natural resources.

1971
The Alaska Native Claims Settlement Act, an outgrowth of the Alaska Statehood Act, is a law of great importance to the National Wildlife Refuge System. Among other provisions, ANCSA authorized the addition of many acres of highly productive, internationally significant wildlife lands to the system.

1973
The Endangered Species Act is passed, strengthening previous provisions and redirecting management emphasis on some national wildlife refuges to focus on recovering species. More than 25 new refuges have been added to the Refuge System under the Act's authority, including Attwater Prairie Chicken NWR (TX), Mississippi Sandhill Crane NWR (MS) and Columbian White-tailed Deer NWR (WA).

1980
The Alaska National Interest Lands Conservation Act adds some 54 million acres to the Refuge System in that state–expanding seven existing refuges and adding nine new ones. These additions nearly triple the acreage of the National Wildlife Refuge System.

1994
The nation's 500th national wildlife refuge is established at Canaan Valley, West Virginia.

1997
The National Wildlife Refuge System Improvement Act provides comprehensive organic legislation for the Refuge System. The Act establishes fish, wildlife and plant conservation as the mission of the system. It also gives priority to certain wildlife-dependent recreational uses on national wildlife refuges–hunting, fishing, wildlife observation and photography, and environmental education and interpretation–when they are compatible with the refuge's purposes and the System's mission.

2000
The Refuge System grows to more than 93 million acres and 531 units. The National Wildlife Refuge System Centennial Act names 2003 as "Year of the Wildlife Refuge," charges the Secretary of the Interior with recruiting a commission of distinguished citizens to rally public support, and requires the Department of the Interior to develop new benchmarks for Congress to evaluate progress on the system's maintenance, operations and construction backlog.

2003
Happy 100th birthday National Wildlife Refuge System!

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Hunting and Fishing on National Wildlife Refuges

The National Wildlife Refuge System– Celebrating a Century of Conservation

Hunting and fishing are two of the priority public uses allowed on national wildlife refuges. More than half of the units in the Refuge System allow these two activities.

Hunting

Since the 19th century, hunters concerned about the future of wildlife and outdoor tradition have made countless contributions to conserving our nation's wildlife resources. The U.S. Fish and Wildlife Service has long recognized hunting as a legitimate and traditional form of wildlife-dependent recreation and, in some locations, as an effective wildlife population management tool.

Hunting is now permitted on nearly 300 refuges and on all of the Service's hundreds of waterfowl production areas There were about 2 million hunting visits to national wildlife refuges in 1999, and this number is growing steadily. Waterfowl hunting is up over the past five years thanks to a rebound in most duck populations.

By purchasing Federal Duck Stamps, hunters have helped buy land for the Refuge System for nearly 70 years. Since 1934, more than half a billion dollars has been collected from the sale of Migratory Bird Hunting and Conservation Stamps–known as Federal Duck Stamps. Ninety-eight percent of the money from the sale of these stamps Duck Stamps is deposited in the Migratory Bird Conservation Fund and used to purchase wetland habitat. So far, these funds have been used to purchase nearly 5 million acres for the Refuge System. Waterfowl hunters 16 years or older must purchase a Duck Stamp. About 10 percent of Duck Stamps are bought by non-hunters (stamp collectors, art enthusiasts and conservationists). Another $197 million has been added to the Migratory Bird Conservation Fund as an advance loan from the U.S. Treasury. Finally, about $153 million has been added to the fund from import duties on firearms and ammunition, and from refuge entry fees.

Among hunting opportunities on refuges around the nation are:

- Anahuac NWR near Houston, Texas, draws waterfowl hunters to an abundance of mallards, gadwalls, wigeons, northern pintails and other birds. Late fall and early winter bring the flight of up to 80,000 geese and 100,000 ducks.
- Alaska Peninsula/Becharof NWR Complex attracts big game hunters in search of brown bears.
- Flint Hills NWR near Topeka, Kansas, is a great location for small game and upland bird hunting.
- Bosque del Apache NWR in Socorro, New Mexico, brings sportsmen and women in search of cottontail rabbits and quail. The refuge also features one of the most thrilling wildlife spectacles—the world's largest concentration of greater sandhill cranes.
- Seney NWR, in Michigan's Upper Peninsula, is a popular for bear, deer, ruffed grouse, woodcock and snipe hunters. The refuge has a mixed terrain of pine and hardwood forests, meadow, bog, marsh, and more than 7,000 acres of open water.

Fishing

Many lands and waters managed by the Service allow fishing, including nearly 260 public fishing programs on national wildlife refuges nationwide.

There were about 6 million fishing visits to national wildlife refuges in 1999. The number of visitors who fish in saltwater fishing in growing; the number who fish in freshwater is holding steady. Recent surveys indicate that many people fishing to experience solitude and be in a quiet place. National wildlife refuges can offer a quiet and wild fishing experience.

Among prime fishing experiences on national wildlife refuges are:

- Tamarac NWR in Minnesota features some 21 lakes, 5 of which are open to canoes or small boats. Anglers can catch northern pike and walleye.
- Bayou Sauvage NWR, near New Orleans, gives urban anglers a spectacular setting for both freshwater and saltwater fishing.
- Another urban refuge, Philadelphia's John Heinz NWR at Tinicum, provides year-round fishing opportunities; it is one of a growing number of refuges with facilities that are disabled accessible.

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The National Wildlife Refuge System Improvement Act of 1997

The National Wildlife Refuge System—Celebrating a Century of Conservation

"The mission of the [National Wildlife Refuge] System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans."

The National Wildlife Refuge System is the world's most comprehensive network of public lands and waters set aside specifically for fish and wildlife. The U.S. Fish and Wildlife Service manages the Refuge System.

Landmark Law

In 1997, Congress passed the National Wildlife Refuge System Improvement Act. This law gives the Refuge System a strong and singular wildlife conservation mission and provides significant guidance for management and public use of the Refuge System. The Act's main components include:

- a mission statement for the Refuge System;
- a requirement to maintain the biological integrity, diversity and environmental health of the Refuge System;
- recognition that wildlife-dependent recreational uses involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation, when determined to be compatible, are legitimate and appropriate priority public uses of the Refuge System;
- a requirement that managers prepare a comprehensive conservation plan for each refuge.

The Act also declares that compatible wildlife-dependent recreational activities are legitimate and appropriate priority public uses of the Refuge System. These six activities—hunting, fishing, wildlife observation and photography, and environmental education and interpretation–receive enhanced consideration in planning and management over all other public uses of the System.

Compatibility Determination

A compatibility determination is required when proposing wildlife-dependent recreational use or any other public use of a refuge. Refuge managers strongly encourage the six priority wildlife-dependent recreational uses when they are compatible with the "wildlife first" mission of the refuge The six priority public uses are reviewed for compatibility less frequently than other uses. The decision about which compatible activities to allow on each refuge depends on a refuge's purposes, wildlife and habitat objectives, local demographics, and attributes of the land itself.

The Service published its final Compatibility Policy and Regulations in October 2000. The policy provides a strong framework to continue to manage refuge lands sensibly in keeping with the goal of putting wildlife first, while providing recreational and educational opportunities for a growing number of visitors.

Comprehensive Conservation Planning

The Refuge System Improvement Act requires Service managers to develop a comprehensive conservation plan for each refuge and to manage each refuge consistently with that plan.

Comprehensive conservation plans will guide refuge management for the next 15 years, and plans will be reviewed and updated every five years. The planning process for most refuges will:

- provide a clear statement of the desired future habitat condition of the refuge;
- ensure that management of the refuge is consistent with the goals and policies of the National Wildlife Refuge System;
- provide refuge neighbors and partners with a clear understanding of the reasons for management actions on and around the refuge;
- provide for long-term continuity in refuge management;
- provide a basis for Service staffing and for operations, maintenance, and capital improvement budget requests;
- identify potential projects for cost share and partnership contributions.

Based on public comments and input from interested groups and agencies, the Service will explore the potential for expansion of refuges, public use on refuges or establishment of new refuges.

An environmental assessment will include several alternatives for refuge management. The Service will select the preferred alternative, which will be developed into the refuge's comprehensive conservation plan.

Interagency Coordination and Public Involvement

When planning for expanded and new refuges, and when making refuge management decisions, the Act requires effective coordination with other Federal agencies, state fish and wildlife or conservation agencies, and refuge neighbors. In addition, refuges are required to provide opportunities for public involvement when making a compatibility determination or developing a comprehensive conservation plan by holding public meetings and otherwise informing the community of their intentions.

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Facts About the National Wildlife Refuge System

The National Wildlife Refuge System—Celebrating a Century of Conservation

The year 1903 saw the establishment of the first national wildlife refuge at Pelican Island, Florida. President Theodore Roosevelt established the tiny 3-acre Pelican Island refuge by executive order, and went on to create 55 more refuges before he left office in 1909.

Today, the Refuge System encompasses more than 530 units spread over 93 million acres. As the National Wildlife Refuge System prepares to mark its centennial in 2003, it has a new mission and a goal to put wildlife conservation first while providing recreation and education opportunities for a growing number of visitors–more than 35 million last year.

The National Wildlife Refuge System includes:

- more than 93 million acres of land and water—the only national network of public lands set aside to conserve fish, wildlife and plants.
- more than 530 refuges, several thousand waterfowl production areas and 51 coordination areas.
- a wide variety of "special management areas" such as wilderness, research natural areas, wetlands of international importance, wild and scenic rivers, and national natural landmarks.
- twenty-one refuges designated as Class I areas under the Clean Air Act. These areas, including Cape Romain NWR (SC), Okefenokee NWR (GA) and Moosehorn NWR (ME), receive the highest levels of air quality protection.
- important habitat for more than 700 bird species, 220 mammals, 250 reptile and amphibian species, and more than 200 species of fish.
- hundreds of refuges located along the four major migration corridors, or flyways, for waterfowl and other birds (the Atlantic, Mississippi, Central and Pacific flyways). These refuges are vital breeding, feeding and resting places for millions of birds on their long annual migrations.

The Refuge System provides habitat for 180 threatened and endangered animal species and 78 threatened or endangered plants. Fifty six refuges have been acquired principally under authority of the Endangered Species Act, including Crystal River NWR (FL) for manatees, Oklahoma Bat Caves NWR (OK) for endangered bats, Hakalau Forest NWR (HI) for endangered Hawaiian birds and Ash Meadows NWR (NV) for 12 species of plants and fish.

The Refuge System attracts more than 35 million visits annually who enjoy wildlife-dependent recreation.

- Ninety-eight percent of the land in the Refuge System is open to the public.
- The Refuge System offers environmental education programs on 230 field stations.
- The Refuge System offers hunting on more than 290 refuges and fishing on more than 260 refuges.

Extreme Refuge System Facts

- Superimposed over the lower 48 states, the 3.6 million acres of islands in Alaska Maritime NWR would stretch from California to Florida.
- The 500th national wildlife refuge, Canaan Valley (WV), is the highest valley east of the Rocky Mountains.

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- The smallest refuge is the half-acre Mille Lacs NWR (MN) and the largest is Alaska's Arctic NWR, at a whopping 19.2 million acres
- North Dakota has the most refuges (64), followed by California (38) and Florida (29).
- A number of national wildlife refuges are named for famous people such as authors (Mark Twain NWR in IL and MO), artists (Audubon NWR in ND) and politicians (Silvio O. Conte NFWR in New England).
- Although 96 percent of the National Wildlife Refuge System units are located in the lower 48 states, Hawaii and U.S. territories, 85 percent of the system's acreage is in Alaska.
- One of the largest swamps in the United States, 600-square-mile Okefenokee NWR (GA), is a Wetland of International Importance. It is home to 15,000 alligators and carnivorous plants.
- Prehistoric loggerhead turtles coexist with high-tech space shuttles at Merritt Island NWR (FL), which lies adjacent to NASA's Cape Canaveral. Merritt Island Refuge also has more kinds of endangered species—including bald eagles, wood storks and manatees—than any other refuge.

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Recreation and Education on National Wildlife Refuges

The National Wildlife Refuge System—Celebrating a Century of Conservation

For nearly a century—since 1903—national wildlife refuges have been great places to get away from it all and enjoy outdoor recreation and education at their best. Because the National Wildlife Refuge System's origins are rooted in protecting migratory birds, many refuges have been established along the four major migration routes, or flyways (Atlantic, Mississippi, Central and Pacific). Excellent birdwatching opportunities abound on those refuges.

But refuges aren't only for bird watching! More than 35 million people visit national wildlife refuges each year to hunt, fish, watch and photograph wildlife, and learn more about the natural world at some of our nation's wildest places.

In 1997, Congress established hunting, fishing, wildlife observation and photography, and environmental education and interpretation as priority public uses where compatible with the mission and purpose of the individual refuges.

Congress maintained refuge managers' authority to use sound professional judgement to determine compatible public uses and whether or not they will be allowed. Further, Congress established a formal process to determine "compatible use."

Wildlife Observation and Photography

More than 16 million visitors came to national wildlife refuges in 1999 to watch birds, mammals and fish. Among the activities they enjoyed:

- watching migrating songbirds and mating horseshoe crabs along the mid-Atlantic coast in summer
- seeing twenty different duck species darken the sky—along with 10,000 tundra swans and hundreds of bald eagles—along the California-Oregon border
- admiring wading birds such as egrets, ibises and spoonbills, and songbirds including warblers, buntings and cuckoos, along the Florida Gulf coast
- watching brilliant sunsets among elk, pronghorn antelope, prairie dogs and black-footed ferrets in Montana

Fishing

In 1999, some 6 million people visited national wildlife refuges to fish. They had plenty of choices for outstanding angling: more than 260 refuges offer fishing opportunities. Among the experiences anglers may enjoy on national wildlife refuges:

- reeling in trophy northern pike and bluegill in Nebraska
- seeking bass, bream and crappie amidst bottomland hardwoods in the Southeast
- finding magnificent trophy king salmon in Alaska

Hunting

About 2 million hunters come to national wildlife refuges each year. Nearly 300 refuges offer hunting–from big game to waterfowl. No matter where you live, if you're looking for hunting, you're sure to find opportunity close to home. A few examples of excellent hunting programs on refuges include:

- moose hunting, as well as hunting for black and brown bear and barren-ground caribou, at Alaska's interior refuges
- snipe, pheasant and quail hunting in Oregon
- white-tailed deer, squirrel, raccoon and rabbit hunting in Alabama

Environmental Education and Interpretation

Hundreds of thousands of schoolchildren and millions of adults visit refuges each year. They come on their own or as part of school or tour groups to learn more about the environment. Many refuges have environmental education programs, which range from interpretive nature walks for local school children to full-scale teacher-training programs. Many refuges also have environmental education centers.

Environmental education opportunities at refuges include:

- outdoor classroom activities and education about the importance of saltmarsh habitat to migratory birds near San Francisco
- a Midwestern prairie learning center with exhibits on prairie management and restoration, a simulated underground insect burrow and other interactive experiences
- a visitor center near the nation's capital that offers wildlife management demonstrations and year-round outdoor education sites for local schools

Increasing Opportunities through Cooperation

The Fish and Wildlife Service has entered into a number of partnerships with conservation, recreation and sportsmen's organizations to promote recreation on national wildlife refuges. For example:

- A partnership with the National Wild Turkey Federation expanded cooperation to protect, conserve and manage habitat for wild turkeys on refuges. Some 450,000 people hunt turkeys and other upland game on refuges each year.
- In 1997, the Service inked an agreement with the North American Nature Photography Association to promote wildlife and nature photography on national wildlife refuges.
- The Service and Safari Club International cooperate to promote conservation, education, public service and wise stewardship of public lands.

Contact individual national wildlife refuges for information about which recreational uses are permitted.

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Special Management Areas in the National Wildlife Refuge System

The National Wildlife Refuge System—Celebrating a Century of Conservation

A wide variety of special land designations overlay national wildlife refuges. These special designations do not change the mission or management mandate of any refuge; all refuges are managed to conserve, manage and restore the nation's fish and wildlife habitat.

Among the other varied special management area types found on refuges are cultural resource sites, historic sites, research natural areas, wild and scenic rivers, national natural landmarks, and national trails. Some overlay designations may place refuges within larger networks of protected lands, such as national marine sanctuaries, estuarine sanctuaries, and biosphere reserves, or international networks of protected lands such as western hemisphere shorebird reserves and wetlands of international importance.

Special land designations originate with a variety of sources, from Congress and the President to other agencies and organizations, depending on the type of designation.

Wilderness Areas

Wilderness is a special designation applied by Congress to Federal lands ". . . where the earth and its community of life are untrammeled by man, where man is a visitor who does not remain."
Congress has designated about 20 percent of the lands and waters of the National Wildlife Refuge System as wilderness—more than 20 million acres have been designated on 65 refuges. This is a portion of the more than 105 million acres in the National Wilderness Preservation System, which is managed by the U.S. Fish and Wildlife Service, Bureau of Land Management, National Park Service, and U.S. Forest Service.

In designated wilderness, refuge staff carry out management activities in a way that preserves the wild and undeveloped character of the land. The public can enjoy solitude and the beauty of nature without many of the intrusions of modern, industrial society.

Wild and Scenic Rivers

For a river to be eligible for the National Wild and Scenic Rivers System, it must be free-flowing and possess one or more specific values such as scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similarly unique characteristics worthy of preserving. Wild and Scenic designations are made by Congress upon recommendation from the President.

Of the 10,815 river miles in the Wild and Scenic Rivers System, more than 1,400 miles are managed by the Service as parts of national wildlife refuges. Examples include the 285 mile long Ivishak River managed as part of Arctic NWR (AK), and a 5-mile segment of the Niobrara River that flows through Ft. Niobrara NWR (NE).

National Monuments

The Antiquities Act authorizes the President to establish as national monuments "historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest" that are located on Federal lands. Nearly every president since 1906 has exercised his power to designate national monuments.

In 2000, President Bill Clinton created the 195,000-acre Hanford Reach National Monument under management by the Service to preserve extraordinary biological, geological, paleontological, archaeological and historic features. The national monument encompasses the 51-mile Hanford Reach, which is the last non-tidally

influenced, free-flowing stretch of the Columbia River and supports some of the most productive salmon-spawning areas in the Pacific Northwest. The monument also contains one of the last remaining large blocks of shrub-steppe ecosystem in the Columbia River Basin.

National Natural Landmarks
National natural landmarks are management areas having national significance because they exemplify one of a natural region's characteristic biotic or geologic features. Sites are designated by the Interior Secretary. Each site must be one of the best known examples of a unique feature and must be located in the United States or on the Continental Shelf. The national natural landmarks managed entirely or in part under the Refuge System contain important ecological or geological feature deserving protection or further study. These areas, which encompass acres, have been maintained relatively free of human disturbance for long periods of time and thus approximate a stable environment.

Biosphere Reserves
Biosphere reserves are protected areas of representative terrestrial and coastal environments which have been internationally recognized under the UNESCO Man and the Biosphere Program for their value in conservation and in providing the scientific knowledge, skill and human values to support sustainable development. Biosphere reserves are united to form a worldwide network which shares information relevant to conserving and managing natural and managed ecosystems.

Five units of the National Wildlife Refuge System are included in biosphere reserves.

- Aleutian Islands Unit of Alaska Maritime NWR (AK) is included in the Aleutian Islands Biosphere Reserve.
- Blackbeard Island NWR (GA), Wolf Island NWR, and Cape Romain NWR (SC) are included in the Carolinian-South Atlantic Biosphere Reserve.
- Farallon NWR (CA) is included in the Central California Coast Biosphere Reserve.

Western Hemisphere Shorebird Reserve Network
The Western Hemisphere Shorebird Reserve Network links wetland and associated upland sites essential to migratory shorebirds in a voluntary, nonregulatory program of research, training, and collaboration for habitat management, environmental education, and protection. Shorebirds migrate across the hemisphere, some from the Arctic to Tierra del Fuego. Their movements carry them through wetlands with immense natural value to wildlife and to humans alike. The network uses shorebirds as symbols of the intense conservation challenge that wetlands face, and of the need for international cooperation to protect these areas.

Twenty areas within the National Wildlife Refuge System have been designated as shorebird reserves.

Wetlands of International Importance
Adopted in 1971 in Ramsar, Iran, the Convention on Wetlands of International Importance provides a framework for the conservation of wetlands worldwide. Marsh, fen, peatland or water–static or flowing, fresh, brackish or salt–even riparian or coastal zones adjacent to wetlands are included in and protected by the Ramsar Convention.

Areas within the National Wildlife Refuge System that have been designated as units of Ramsar sites include:

- Izembek Lagoon NWR and State Game Area (AK)
- Forsythe NWR (NJ)
- Okefenokee NWR (GA and FL)
- Ash Meadows NWR (NV)
- Pelican Island NWR (FL)
- Sand Lake NWR (SD)

National Register of Historic Places, National Historic Landmarks
To date, the Service has identified more than 8,000 cultural resources based on surveys of approximately 1 percent of the lands it manages. These include 11,000 year old archaeological sites, shipwrecks and their cargo, historic plantations and buildings, cemeteries and burial grounds, lighthouses, and battlefields. Hundreds of these sites are listed on or eligible for the National Register of Historic Places. Seven have been designated as National Historic Landmarks. While many Service cultural resources are adequately protected, hundreds of sites continue to be threatened by erosion, project impacts, deterioration, and theft of artifacts.

National Wildlife Refuge System resources that are registered historic places or historic landmarks include:

- DeSoto NWR (IA), with its collection of cargo recovered from the Steamboat Bertrand, which ran aground in sand in the Missouri River in 1865.
- Lake Ilo NWR (ND), where a six-year archaeological study has yielded a wealth of information about the Paleoindian peoples of the northern plains.
- Sevilleta NWR (NM), which features petroglyphs dating back to the 12th century A.D.
- Necker Island Archeological District at Hawaiian Islands NWR (HI).

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Wilderness Areas on National Wildlife Refuges

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The largest wilderness area in the refuge system is 8 million acres on Alaska's Arctic NWR. Nearly 75 percent of the Alaska Maritime NWR is wilderness; these 11 island wilderness units comprise 2.5 million of the Refuge's 3.5 million acres. Other maritime island refuge wildernesses include the Oregon Islands and Three Arch Rocks NWRs spanning the 320-mile Oregon coastline; the Flattery Rocks, Quillayute Needles, and Copalis NWRs extending along 100 miles of the Washington coastline; the San Juan Islands NWR in Washington's inland waters; and the Farallon Islands NWR off the California coast.

Great Swamp NWR in New Jersey was the first national wildlife refuge to receive wilderness designation–3,660 acres in 1968. Most recently, more than 8 million acres on Havasu and Imperial NWRs on the California-Arizona border were designated as wilderness.

The very first national wildlife refuge also represents the smallest wilderness area in the National Wildlife Refuge System. Pelican Island, established as a refuge in 1903, was designated as a 6-acre wilderness area in 1970.

In designated wilderness, refuge staff carry out their management activities in a way that preserves the wild and undeveloped character of the land, and the public can enjoy solitude and the beauty of nature without many of the intrusions of modern, industrial society.

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Waterfowl Production Areas: Prairie Jewels of the Refuge System

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Waterfowl production areas preserve wetlands and grasslands critical to waterfowl and other wildlife. Managed by the U.S. Fish and Wildlife Service, these public lands became part of the National Wildlife Refuge System in 1966 through the National Wildlife Refuge Administration Act.

Nearly 95 percent of waterfowl production areas are located in the prairie wetlands, or potholes, of North and South Dakota, Minnesota, and Montana. North Dakota alone is home to more than a third of the nation's waterfowl production areas. Other key states are Nebraska, Wisconsin and Iowa. Michigan has two waterfowl production areas; Idaho and Maine each have one.

Prairie potholes are lifelines for the fish and wildlife of the entire prairie landscape, from the Rockies to Wisconsin. If wetlands in this vast prairie pothole region were not saved from drainage, hundreds of species of migratory birds would have been seriously threatened or become extinct.

The Migratory Bird Hunting and Conservation Act (known as the "Duck Stamp Act"), was passed in 1934 and amended by Congress in 1958, authorizing the Service to acquire wetlands and uplands as waterfowl production areas. Thus began one of the most aggressive acquisition campaigns in history and what would ultimately become a race against draining some of the nation's most valuable wetland habitat.

Nearly 3,000 waterfowl production areas cover 668,000 acres nationwide. They average 223 acres in size. The smallest is less than an acre (Medicine Lake WPA in North Dakota) and the largest is 3,733 acres (Kingsbury Lake WPA in Montana).

Some waterfowl production areas have been donated as gifts while a few have been reserved from public domain lands. The first waterfowl production area purchased with Federal Duck Stamp funds was McCarlson WPA in Day County, South Dakota in 1959.

By law, waterfowl production areas are open to hunting, fishing and trapping. Other important wildlife-dependent uses allowed include wildlife observation, photography, and environmental education. Nearly 800,000 people visit waterfowl production areas yearly. Waterfowl production areas in the Huron Wetland Management District in South Dakota get more than 100,000 visitors per year–more than any other wetland management district.

Waterfowl production areas are managed by the staffs at wetland management districts around the prairie pothole region. Wetland management districts were created in 1962 as the Fish and Wildlife Service's land acquisition program accelerated after a loan from Congress against future Duck Stamp sales. Each wetland management district has a staff of two to 12 people, including wildlife managers, biologists, technicians, maintenance workers and administrative specialists.

Wetland management district staff also manage wetland easements, perpetual contracts with willing private landowners who protect their wetlands from draining and filling with soil. To date, the Service has acquired nearly 25,000 easements covering 1.6 million acres. In recent years, the Service has also purchased grassland easements to provide permanent grassland cover around wetlands to meet the needs of upland nesting waterfowl and other wildlife.

Although waterfowl production areas, easements and national wildlife refuges account for less than 2 percent of the landscape in the prairie pothole region states, they are responsible for producing nearly 23 percent of this area's waterfowl. Just as important, staff at wetland management districts work extensively with private landowners through voluntary partnerships that enhance private lands for waterfowl and other wildlife.

Interesting Facts about WPAs

- The Rainwater Basin Wetland Management District in Nebraska is one of the most important stopover areas for waterfowl in North America. Approximately 2 to 3 million geese and 7 to 9 million ducks use the area for a few weeks between February and April each year as they wing their way to their breeding grounds.
- Waterfowl production areas are not just for ducks and geese, though. Several threatened or endangered species, especially prairie plants such as the western prairie fringed orchid, rely heavily on waterfowl production area habitat for survival. The Service purchased Fuller WPA in northwestern North Dakota to protect nesting threatened piping plovers and for waterfowl production. Other rare or unique species recorded on waterfowl production areas in the West include grizzly bears, mountain lions, bobcats, blue grouse and wolverines.
- Waterfowl production areas also protect a large portion of the remaining tallgrass in the Midwest. Helikson WPA in northwest Minnesota contains 1,373 acres of virgin prairie with grasses over 6 feet tall.
- Waterfowl production areas are usually named after the owner who sold the land to the Fish and Wildlife Service, while a few stick with names given by local residents. Some unusual names are: Mosquito Ranch, Humpty Dumpty, Robin Hood, Maga TaHohpi (Yankton Sioux for "duck nest"), Gomer Trout, and Kicking Horse.
- The Blackfoot River, made famous in the book and movie "A River Runs Through It," winds through the Blackfoot WPA in Montana.
- Plover WPA, in Lac qui Parle County, Minnesota, had granite bedrock outcrops exposed 10,000 years ago by a glacial river. The bedrock is said to be some of the oldest in the world.
- Jarina WPA, at the foot of the east face of the Rockies in Montana, is the windiest waterfowl production area. Fierce southerly winds that reach 100 m.p.h., known as Chinooks, roar across the terrain and tear bolted boundary signs from their posts.

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